CORRECTION

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The following corrections have been made to the Abstract Supplement:

Correction to author list:

O02.2

PSYCHOLOGICAL CORRELATES OF TYPE 2 DIABETES IN MIGRANTS ALONG THE UNITED STATES (U.S.)-MEXICO BORDER

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Introduction & Purpose: Along the U.S.-Mexico border, diabetes prevalence is 2-3 times higher than national averages in either country. This region is home to a high concentration of migrants and deportees at risk for diabetes due to low socioeconomic status, housing/food insecurity, and chronic stress. Investigation of diabetes in migrants and deportees is scant; little is known about the unique risk profiles of these populations. This study aimed to assess prevalence of diabetes and prediabetes in a high-risk border population in Tijuana, Mexico, examine the relationships of depression symptoms, anxiety symptoms, and adverse childhood experiences (ACEs) with diabetes prevalence and glucose regulation, and explore indirect effects of social support in these relationships. Methods: Participants were recruited from a walk-in primary care clinic which primarily serves low-income migrants near the US-Mexico border. Diabetes was diagnosed by hemoglobin A1c (HbA1c) value ≥ 6.5%, or by self-report of previous diagnosis by a physician, or use of oral antihypoglycemics. Psychosocial variables were measured via self-report. Sample characteristics were estimated in SPSS Statistics; regression models were conducted in MPlus. Results: Participants were 220 adults aged 19-83 years (M age = 47.2, SD = 11.9). The majority was male (74.5%) and of Mexican nationality (89.1%). Over 70% reported history of migration to the U.S.; 58.6% reported at least one deportation. Prevalence of clinically significant depression was 33.2%, clinically significant anxiety was 30.5%, and 49% of the sample reported ≥ 4 ACES items. Prevalence of diabetes was 17.3%; prediabetes (HbA1c: 5.7% - 6.4%) was 29.1%. Controlling for age, sex, education, and income, psychological variables were not significantly associated with diabetes or HbA1c. Indirect effects were found from depression symptoms and ACEs through social support to HbA1c. Conclusions: This is the first study to our knowledge to examine prevalence and correlates of diabetes in a large number of migrants and deportees, an underserved and hard-to-reach population in the U.S.-Mexico border region. Results suggest the need for accessible diabetes prevention interventions in this context that adopt an integrated biopsychosocial approach.

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O03.1

THE DANISH STUDY OF FUNCTIONAL DISORDERS (DANFUND) - COHORT INTRODUCTION WITH MEASURES OF FUNCTIONAL SOMATIC SYNDROME PREVALENCES, AUTONOMIC REGULATION AND LIFESTYLE CHARACTERISTICS

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Aim Functional somatic syndromes (FSS) are associated with poor health status and increased health care cost. The etiology of FSS is only partly elicited, and how to delimit FSS remains unclear. The Danish study of Functional Disorders (DanFunD) was initiated to outline the epidemiology of FSS. The specific aims are to test delimitations of FSS, estimate occurrence, identify risk factors, delimit the pathogenic pathways, and explore the consequences of FSS. Method The study population comprises a random sample of 9,656 adults from the general population. The various FSS were defined according to standard criteria based on symptom reports in questionnaires complemented by telephone diagnostic assessment for FSS and bodily distress syndrome (BDS) in a subsample. Questionnaires on physical and mental health, personality traits, lifestyle, use of health care services, and social factors are combined with physical measures of cardiorespiratory, morphological and metabolic fitness, neck mobility, heart rate variability (HRV), and conditioned pain modulation. A biobank has been established and the cohort is linked to central registries data. The first re-examination (5 year) of the cohort is currently ongoing. Results FSS will be studied in a bio-psycho-social model reflected by a hypothesized causal web on which the analytical plan for DanFunD is based. Selected characteristics of the FSS population will be depicted, incl. prevalence, lifestyle and HRV. Prevalence of FSS were fibromyalgia (3.6%), irritable bowel syndrome (4.6%), chronic fatigue syndrome (8.6%), whiplash associated disorder (1.7%), multiple chemical sensitivity (2.0%) and BDS (16.1%). Lifestyle measures showed that FSS cases differed from non-cases on numerous parameters e.g. poor self-perceived health and higher mental distress ($P < 0.001$), less education, higher BMI, less exercise capacity, and lower muscle strength ($P < 0.05$). HRV measures supported a sympathetic predominance of the autonomic nervous system associated with FSS, most prominent for fibromyalgia and BDS ($P < 0.05$). Conclusion DanFunD data show that FSS are common in the Danish population and that FSS cases differ from non-cases on mental health, socioeconomic factors, physical fitness and autonomic regulation.

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O03.3

ECONOMIC EVALUATION OF A HEALTH BEHAVIOUR INTERVENTION FOR MUSCULOSKELETAL CONDITIONS

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Introduction and purpose: Musculoskeletal conditions and associated health behaviour risks are both costly and burdensome. Owing to their growing costs and burden, economic evaluations which estimate cost implications and cost-effectiveness of potential treatments facilitates decision about real world application. The purpose of this study was to perform economic evaluation of a health behaviour intervention focused on healthy lifestyle (weight loss, physical activity and diet) for musculoskeletal conditions. Methods: We analysed data from two randomised controlled trials; a trial of 160 patients with low back pain, and a trial of 120 patients with knee osteoarthritis, which compared a six-month healthy lifestyle intervention with usual care. We compared total costs between groups and performed cost-effectiveness analyses. The primary effectiveness outcome was quality-adjusted life years (QALYs). Secondary effectiveness outcomes included pain intensity, disability, weight, and body mass index (BMI). Costs included intervention costs, healthcare utilisation costs (healthcare services and medication use) and absenteeism costs from low back pain. We conducted a primary analysis from the societal perspective (including all cost measures). Results: In the back pain trial, the mean total costs were lower in the intervention group than in the control group (-$614; 95%CI: -3133 to 255). From the societal perspective, for all outcomes, the intervention was on average less expensive and more effective than usual care and the probability of the intervention being cost-effective compared to usual care was relatively high (i.e. 0.81) at a willingness-to-pay of $0/unit of effect. For QALYs, this probability increased to 0.90 at a willingness-to-pay of $17,000/QALY and reached a maximum of 0.96 at $67,000/QALY. For the knee osteoarthritis trial, there were no differences between groups for total costs. For all outcomes, the probability of the intervention being cost-effective compared with usual care was less than 0.33 at all willingness-to-pay values. Conclusions: The healthy lifestyle intervention, appeared to be cost-effective compared to

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usual care for low back pain, however the intervention was not cost-effective for knee osteoarthritis.

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O03.4

EFFECTIVENESS OF SMOKING CESSATION AND WEIGHT LOSS INTERVENTIONS FOR MUSCULOSKELETAL PAIN

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Introduction and purpose: Several health behavioural risk factors have been shown to increase the risk of musculoskeletal conditions such as low back pain and osteoarthritis. Most compelling are links between obesity and smoking, and musculoskeletal conditions; meta-analyses show 1.3 to 3.2 times the odds of developing persistent pain in people who are overweight or smoke. While weight loss and smoking cessation is widely recommended for patients with musculoskeletal conditions who are overweight or smoke, there is no recent synthesis of evidence about effectiveness of intervention strategies. We conducted two systematic reviews evaluating effectiveness of weight loss or smoking cessation interventions in patients with musculoskeletal pain. Methods: Eight databases were searched up to August 2017. Randomised controlled trials of interventions that aimed to reduce smoking or weight of patients with musculoskeletal pain, to improve pain or disability were included. Primary outcomes were pain and disability. Secondary outcomes included weight, physical performance measures, mental health, physical activity, dietary outcomes, and quality of life. We used the Cochrane Risk of Bias tool to assess risk of bias and GRADE to evaluate the quality of evidence. Results: 18 trials were included in the reviews (16 weight loss and 2 smoking cessation), including a total of 3070 and 99 participants respectively. Meta-analysis showed there is moderate quality evidence that behavioural weight loss interventions compared to usual/minimal care for osteoarthritis improved pain (SMD -0.54, 95% CI -0.91 to-0.17) and disability (SMD -0.28, 95% CI -0.45 to -0.11), interventions that included exercise were more effective. Only one trial (n=96) was identified for low back pain, which supported (pharmacological) weight loss. There was low to very low quality evidence that smoking cessation did not reduce pain or disability. Conclusions: Multicomponent weight loss interventions improve pain and disability in patients with musculoskeletal pain, but there is very limited evidence regarding smoking cessation interventions. Multicomponent weight loss interventions and those that included exercise were more effective than dietary weight loss alone.

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O03.5

CAUSAL MECHANISMS OF A HEALTH BEHAVIOUR INTERVENTION FOR PATIENTS WITH MUSCULOSKELETAL PAIN

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Introduction and purpose: Low back pain and knee osteoarthritis are common conditions with a high global burden. Health behavioural risk factors may adversely influence the clinical course of LBP and knee OA and are hypothesised treatment targets to reduce pain and disability. The purpose of this study was to test the causal mechanisms of an integrated clinical and lifestyle focused intervention for patients with LBP and knee OA who are overweight or obese. Methods: Causal mediation analyses of aggregated data (n=280) from two RCTs; which included patients chronic low back pain and knee osteoarthritis. Participants were randomised via one central randomisation schedule, to receive health behaviour intervention, or usual care. The intervention involved clinical advice and education, and referral to a six-month telephone-based healthy behaviour coaching service focusing on behaviour change to support weight loss, physical activity and diet modification. We hypothesised the primary mediator was weight, and alternative mediators were diet, physical activity and pain beliefs. Outcomes were pain, disability and quality of life (QoL). Data were analysed using causal mediation analysis with sensitivity analyses for sequential ignorability. All mediation models were specified a priori in a published protocol. Results: The health behaviour intervention had no effect on pain intensity, disability or QoL in patients with low back pain or knee osteoarthritis. The intervention did not reduce

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weight, or the alternative mediators (diet, physical activity, pain beliefs), and these mediators were not associated with the outcomes (with one exception; poor diet was associated with lower mental quality of life). Conclusions: The health behaviour intervention delivered primarily using the telephone did not change the intended targets of weight, diet, physical activity and pain beliefs. The hypothesised mediators were not associated with the outcomes, meaning their role as treatment target might be questioned for treating musculoskeletal pain. However, targeting these mediators, in particular the lifestyle risk factors, may offer other health benefits such as improved cardiovascular disease risk, particularly for overweight or obese patients.

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O04.5

DO MINDFULNESS-BASED INTERVENTIONS IMPROVE HEALTH OUTCOMES FOR ADULTS LIVING WITH CHRONIC ILLNESS? RESULTS FROM A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction/Purpose: The purpose of this systematic review and meta-analysis was to examine the efficacy of mindfulness-based interventions (MBIs) on psychological, immunological, and disease outcomes among adults living with cardiovascular disease (CVD), type II diabetes (T2DM), or human immunodeficiency virus (HIV). Methods: Comprehensive searches identified studies that (a) evaluated a MBI in adults with CVD, T2DM, or HIV, (b) used a randomized controlled trial (RCT) design, (c) assessed psychological outcomes (e.g., anxiety, depression) or physiological markers (e.g., systolic blood pressure [SBP]), immunological (e.g., CD4+ counts), and disease (e.g., HbA1c) outcomes, and (d) available through December 2017. Independent raters coded study, sample, design, intervention content, and methodological quality criteria. Results: Of the 6,697 records identified through comprehensive searches, 33 RCTs met the inclusion criteria. Studies were published (or available) between 1996 and 2017 and conducted in multiple countries within North America (47%), Asia (28%), and Europe (25%). The studies sampled adults with CVD (N = 1406, M age = 57, 40% women), T2DM (N = 450, M age = 59, 57% women), or HIV (N = 943, M age = 43, 22% women). Participants were recruited through clinic (63%), community (16%), or clinic and community (22%) venues. The MBI used most often was Mindfulness-Based Stress Reduction (Kabat-Zinn, 1990). Comparison conditions included passive (56%; e.g., usual care, wait-list) or active (44%; e.g., aerobic exercise) controls. Participants receiving a MBI improved on psychological outcomes (e.g., fewer depressive symptoms) and physiological markers (e.g., lower SBP) compared to passive controls. The findings were mixed when MBIs were compared to active controls. Too few studies assessed markers of disease progression to draw conclusions. Conclusions: MBIs can improve psychological and physiological markers in adults with chronic illness but limited evidence exists to support MBIs as an effective therapeutic approach compared to other treatments. RCTs that directly compare MBIs to other evidence-based approaches and include measures of disease progression are needed to determine the potential benefits for adults living with chronic illness.

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O07.6

FIRST CONSENSUS OF CHILEAN BARIATRIC PSYCHOLOGISTS ABOUT MENTAL HEALTH MANAGEMENT PRE AND POST-BARIATRIC SURGERY.

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INTRODUCTION & PURPOSE: Bariatric surgery is the most effective and lasting alternative to weight reduction and improved general health. However, long-term weight maintenance after surgery may be challenging for some patients. Thus, multidisciplinary teams should be involved in the evaluation, treatment, and post-operative support. With the purpose of unifying criteria about mental health aspects, a scientific-based consensus was elaborated. METHODS: all members of the NPCO – Chilean Bariatric Psychologists, part of Chilean Bariatric and Metabolic Society were invited to participate, representing teams from 8 different regions throughout Chile.

A questionnaire including the most important topics, such as preoperative contraindications, psychological risk factors of weight regains, postoperative support, was designed and sent to 50 national experts. When no agreement among them was achieved, the Delphi methodology was applied. Scores of 86% or greater were used for inclusion consensus. The recommendations here presented were widely discussed in several scientific meetings with active participation of all members of the group and were highly based on scientific evidence covered by the literature. CONCLUSIONS: The main conclusions reached are that clinical findings are critical for the preoperative diagnosis and treatment adherence. The purpose of the psychological assessment has shifted from identifying contraindications for bariatric surgery and evolved towards assessing psychological and behavioral readiness. The achievement of pre-surgery preparatory behavioral changes are recommended to optimize their postoperative outcomes. Acquisition of a healthy lifestyle is the most important therapeutic tool for long-term weight maintenance. Thus, therapeutic postoperative support is fundamental. The psychologist undertaking the assessment needs specific experience and knowledge of bariatric surgery, as well as the preoperative and postoperative issues that may arise. There are specific recommendations for adolescents as this group presents special needs according to their development stage.

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O08.5

INFANT FEEDING AND ITS ASSOCIATION WITH BODY COMPOSITION GROWTH TRAJECTORIES IN THE FIRST 6 MONTHS OF LIFE: THE ETHIOPIAN IABC BIRTH COHORT

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Infant feeding is influencing early body composition which may have long term effects on growth, development and risk of diseases, including obesity. However, current evidence is inconsistent and mainly from high income countries. We assessed associations of infant feeding with trajectories of body composition from birth to 6 months (mo) in apparently healthy Ethiopian infants. METHODS: We followed 428 term-born Ethiopian infants on a monthly basis from birth to 6 mo of age and used air displacement plethysmography to measure body composition. Infant feeding status was collected through questionnaires at each visit following birth and classified into exclusively breastfed (EBF), predominantly breastfed (PBF), or predominantly non-breastfed (NBF) at 6 mo. Fat- and lean mass trajectories were modelled using multiple linear mixed-effects models with an infant-specific random intercept and slope. Age was specified with natural cubic splines and models were adjusted for sex, birth weight, maternal BMI (kg/m2) 6 mo postpartum and maternal education at delivery. RESULTS: EBF comprised 143 (33.4%) infants, while 264 (61.7%) were PBF and 21 (4.9%) were NBF. NBF infants were either formula- and/or cow milk-fed. Mean±SD birth weight was 3.04±0.42 kg and did not differ between groups. EBF and PBF infants gained more weight at a higher rate between 1-4 mo of age, compared to the NBF. This difference was attributable to a greater fat mass accretion (figure 1a). In contrast, the lean mass trajectories did not differ between infant feeding groups (figure 1b). CONCLUSIONS: The higher fat mass gain associated with breastfeeding is likely to have a beneficial effect as an energy buffer during a period with high growth velocity, brain development and increased risk of infections. The long term effects on growth, development and disease risk in an apparently healthy low income country population needs to be studied further.

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O09.2

STIGMA TOWARD MENTAL ILLNESS AMONG PRIMARY CARE PROFESSIONALS: A NATIONAL SURVEY STUDY IN CHILE.

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Introduction & Purpose: Stigma related to mental illness (MI) is a significant barrier to accessing good quality of care. Special efforts are being made in Chile to strengthen mental health services in primary health care (PHC). The overall objective of this study is to examine and understand in depth the phenomenon of stigma towards people with MI in PHC in
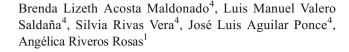
Chile; and to explore whether and how specific factors may influence it. Methods: Cross sectional survey study conducted with health professionals and users from 32 PHC centres of the public health system across Chile. Socio-demographic and other key variables were assessed. In the case of professionals, the self-administered survey included previously adapted international scales: the Opening Minds Scale for Health Care Providers (OMS-HC) (Kassam et al., 2012); the Mental Illness: Clinicians Attitudes Scale (MICA) (Kassam et al., 2010); and the Modified Borgadus Social Distance Scale (Link et al., 1987). In the case of users (>=18 years age/ attended in PHC in the last three months for any MI), their capacity to consent was evaluated first. Their perception of sigma in PHC was assessed by a face-to-face survey which included instruments already validated in Chile:the Perceived Devaluation-Discrimination Scale developed by Link (1987) and the Discrimination Experience subscale of the Internalized Stigma of Mental Illness (ISMI) scale (Ritsher et al., 2003). The Marlowe-Crowne Social Desirability Scale was also considered. Results: 830 PHC professionals and 450 PHC users participated in the study. The results of the analysis will be presented:(1) Student's t-test, ANOVA test and multiple comparisons with Hochberg correction performed to assess differences of continuous variables between groups, while chi-squared tests to assess differences of proportions;(2) Wilcoxon rank-sum test and Kruskal-Wallis test to compare medians between groups;(3) Spearman's rank correlation coefficient to assess the linear relationship between stigma scores and/or numerical variables;(4) General linear models to determine independent factors associated with stigma scores, and to account for possible confounders;(5) Cohen's kappa statistics or intraclass correlation (ICC) to assess the degree of agreement or concordance between stigma scores. Conclusions: We confirmed that there is stigma toward people with MI among PHC professionals in the Chilean public health system. The phenomenon of stigma is complex, affected by different factors, and there are potential opportunities to prevent or mitigate its negative effects. This is the first National study to explore MI stigma among PHC professionals in Chile.

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O10.5
DIFFERENCES IN QUALITY OF LIFE BY SOCIODEMOGRAPHIC AND CLINICAL FACTORS IN PATIENTS TREATED WITH A STEM CELL TRANSPLANTATION

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Hematopoietic stem cell transplantation (HSCT) has been associated with a decrease in patients' quality of life (QOL), but there is little evidence regarding which individual variables contribute to such impact. AIM: To compare QOL domains in patients treated with HSCT along such sociodemographic and clinical variables. METHODS: Comparative, cross-sectional study which included patients treated at public hospital in Mexico. Patients in different phases of an HSCT (pre-transplant, during the transplant and post-transplant) were enrolled from 2016 to 2017. The European Organisation for Research and Treatment of Cancer's Quality of Life Questionnaire (EORTC QLQ-C30) was applied to 121 patients (scores ranging from 0 to 100 with higher scores meaning better QOL). PARTICIPANTS: 49% of patients had lymphoma, 29% had leukemia, 16% had multiple myeloma, and 6% had a non-malignant disease. The mean age of patients was 40; 58% were males; 55% were single. RESULTS: Patients' global QOL mean was 83, and subscales' means ranged from 76 (social functioning) to 84 (physical and emotional functioning). Males reported higher physical (x=88 vs x=80; t=2.2; p=.03) and cognitive (x=88 vs x=78; t=2.4; p=.02) functioning as compared to women. Single patients showed lower emotional functioning (x=81 vs x=87; t=-2.1; p=.04) as compared to married patients. Post-transplant outpatients showed better physical functioning compared with hospitalized patients and those that are candidates for HSCT (x=88 vs x=83 vs x=80 respectively; x2=7.7, p=.02). To make comparisons by age, participants were classified into two groups considering mean age (40 years old). This analysis showed that the younger group has higher physical (x=89 vs x=80; t=2.9; p<.01) and role functioning (x=86 vs x=77; t=2.0; p<.05), as well as global QOL (x=86 vs x=80; t=2.1; p=.04), but the older group reported better emotional functioning (x=87 vs x=80; t=2.9; p<.01). There were no differences by the type of transplant or the education level. CONCLUSIONS: While QOL was relatively high across patients, specific QOL domains differed by sociodemographic factors and timing relative to HCT. Clinicians and researchers should be keenly aware of the patients' global context while designing or evaluating QOL interventions.

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O11.1

LATE EVENING FOOD CONSUMPTION AND DEVELOPMENT OF PREDIABETES OR DIABETES: A PROSPECTIVE ANALYSIS FROM THE WHITEHALL II STUDY

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INTRODUCTION & PURPOSE: We examined whether late evening food consumption was associated with development of prediabetes or diabetes. METHODS: From the Whitehall II study, we included 3,587 individuals with normal glycaemia (HbA1c<39 mmol/mol) and followed them for five years. Using recursive partitioning modelling, we studied the association of time of last meal (TLM) before the examination day with the development of prediabetes or diabetes (HbA1c≥39 mmol/mol). Baseline HbA1c, age, sex, BMI, cholesterol, blood pressure, and TLM (continuous variable in whole hours from 16:00 to 3:59) were included as explanatory variables. RESULTS: 1,565 individuals (44%) developed prediabetes or diabetes. Figure 1 shows the survival tree. Among women with HbA1c≤32 mmol/mol, those consuming their last meal after 21:00 had a 55% higher 5-year risk of developing prediabetes or diabetes than those consuming their last meal between 16:00-20:59 (_P_<0.001). TLM was not associated with progression to prediabetes/diabetes among men or among women with HbA1c>32 mmol/mol. CONCLUSIONS: Among women with a good glycaemic control, eating late in the evening is associated with increased risk of developing prediabetes or diabetes.

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O12.1

DEPRESSION, ANXIETY AND PERCEIVED STRESS SCORES COMPARISON BETWEEN PATIENTS WITH CARDIO-RESPIRATORY FAILURE WITH AND WITHOUT COGNITIVE IMPAIRMENT.

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Introduction and Purpose: Heart failure (HF) patients have high levels of anxiety, depression and perceived stress, which may be linked with cognitive impairment in many cases. However, there is no information about patients with cardio-respiratory failure, who have major oxygenation tissue problems, which affects the brain and its functions, including those cognitive and emotional. The purpose of this study was compare anxiety, depression and perceived stress scores between patients with cardio-respiratory failure with and without cognitive impairment. Material and Methods: A cross-sectional study was realized. Sixty-six patients with of cardio-respiratory failure were included heart failure NYHA I-III and chronic obstructive pulmonary disease (COPD), GOLD 1-3. All participants were evaluated with the following tests: a) Hospital Anxiety and Depression Scale (HADS), with 14 items to evaluate anxious and depressive symptomatology; b) Perceived stress scale in the 10 items version, and c) Montreal Cognitive Assessment (MOCA) alternate mexican version 7.2 to determine the presence of cognitive impairment if the score is less or equal to 26 points. According to the MOCA, the participants were divided into two groups: Group 1 (G1, n=8): without cognitive impairment, and Group 2 (G2, n=58), with cognitive impairment. The data was analyzed with SPSS v. 21 for Windows, data didn't present a normal distribution, so the U Mann Whitney test was used. Results: Cognitive impairment was found in the 87.87%. There were no differences in the socio-demographic variables between both groups. Patients with cognitive impairment have major scores of anxiety (G1: 3.88 ± 1.959, G2: 5.47 ± 4.168, p< 0.05) and depression (G1: 4 ± 2.777, G2: 5.97 ± 4.176, p< 0.05) according to the HADS; besides of a major perceived stress (G1: 18.50 ± 5.155, G2: 23.36 ± 6.282, p< 0.05). Conclusions: Patients with cardio-respiratory distress has a high prevalence of cognitive impairment and poor quality of life (more anxiety and depression). The interdisciplinary evaluation and intervention as part of non pharmacological treatment is necessary.

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O15.1

DOES EXPECTATION MANAGEMENT DIMINISH CANCER TREATMENT SIDE EFFECTS? RESULTS OF THE MULTISITE RANDOMIZED CONTROLLED PSY-BREAST TRIAL

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Introduction. Although patients' treatment expectations have been shown to substantially modulate the efficacy and tolerability of medical treatments, expectation-based interventions focusing on the prevention of nocebo mechanisms are lacking. This clinical trial aims to evaluate the efficacy of an expectation optimization training to reduce side effects and improve health-related quality of life in patients undergoing endocrine treatment for breast cancer. Methods. Patients with hormone-receptor-positive breast cancer and indication for adjuvant endocrine therapy (AET) were assigned 1:1:1 to a three-session expectation management intervention (EXPECT), a manualized attention control group (SUPPORT), or treatment as usual (TAU). Our primary outcome was number of side effects at 3 and 6 months after AET start. Secondary outcomes included coping with side effects and health-related quality of life (EORTC-QLQC30 and BR23). Linear mixed models for repeated measures were conducted with adjustments for baseline values, medical, and psychological variables. Results. Among 197 randomized patients (mean age: 58.0 years, 70.6% postmenopausal), 158 (80.2%) and 160 (81.2%) completed the follow-ups at 3 and 6 months. In Intention-to-treat analyses, we have found that primary and secondary outcomes did not differ by group. Moderation analyses at 6M showed that among patients who expected moderate or severe side effects, EXPECT reported fewer side effects than SUPPORT (-4.00, 95% CI [-7.25; -0.75],ES=0.9) and TAU (-3.80, 95% CI [-7.51;-0.08],ES=0.8). The same pattern was found for unspecific side effects (SUPPORT:-2.69, 95% CI [-4.79;-0.60],ES=0.9; TAU:-2.38, 95% CI [-4.22,-0.54],ES=1.0). Higher scores were also found for quality-of-life functioning compared to SUPPORT (9.33, 95% CI [1.42; 17.24],ES=0.9). No significant effect was seen for coping with side effects. Conclusions. A psychological expectation optimization training showed no overall effects at reducing side effects and improving quality of life during adjuvant endocrine treatment. However, significant group differences of clinically significant magnitude were found for patients with negative baseline expectations. Expectation management showed beneficial effects for a targeted group of breast cancer patients.

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O16.2

EFFECTS OF A MULTIDOMAIN LIFESTYLE INTERVENTION ON TELOMERE LENGTH: THE FINGER TRIAL.

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Introduction: Leukocyte telomere length (LTL) is a biomarker of aging and aging-related diseases. While LTL tends to decrease with age, various lifestyle factors are associated with LTL maintenance or decline. The goal was to assess the association between a 2-year multidomain lifestyle intervention, LTL change and cognition. Methods: The Finnish Geriatric Intervention Study to Prevent Cognitive Impairment and Disability (FINGER) was a 2-year randomized controlled trial among older adults at risk for cognitive decline (N=1260, aged 60-77 years). Participants were randomly assigned to the lifestyle intervention (diet, exercise, cognitive training and vascular risk management) and control (general health advice) groups. Telomere length measurements were available for 775 participants (392 control, 383 intervention). Primary outcome was change in cognition (neuropsychological test battery). Secondary outcomes were changes in specific cognitive domains: memory, executive functioning, and processing speed. Mixed effects regression models were used to analyse change in cognition as a function of randomization group, time, and LTL change. We also tested the associations between the FINGER intervention and cognition among individuals with or without LTL decline. All models adjusted for age and sex. Results: Less LTL decline was associated with significantly larger cognitive benefits from the intervention for the abbreviated memory score ($\beta = 0.253$, p = 0.032) and executive functioning ($\beta = 0.232$, p = 0.008). Intervention effects were found among those without LTL decline for the total composite scores ($\beta = 0.031$, p = 0.029), abbreviated memory score ($\beta = 0.055$, p = 0.025), and executive

functioning ($\beta = 0.051$, $p = 0.005$). In contrast, the intervention effect was found among those with LTL decline for processing speed ($\beta = 0.056$, $p = 0.025$). Conclusion: For the first time, a multi-domain lifestyle intervention was shown to have significant impact on the associations between LTL change and cognitive improvement. Compared to controls, individuals without LTL decline showed larger cognitive benefits on the total composite score, abbreviated memory and executive functioning, while individuals with LTL decline showed the largest benefits for processing speed. No LTL decline may represent an important underlying mechanism for the associations between multidomain lifestyle interventions and cognitive improvement.

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O18.4

USING MOBILE AND SENSOR TECHNOLOGY TO IDENTIFY EARLY DEHYDRATION RISK IN HEAD AND NECK CANCER PATIENTS UNDERGOING RADIATION TREATMENT: IMPACT ON QUALITY OF LIFE

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Introduction & Purpose: Assessment and intervention using mobile and sensor technology have great potential to improve the early detection and mitigation of cancer treatment-related complications, and thus improve quality of life, reduce complications, and lower health care costs. We evaluated the efficacy of a home monitoring system, CYCORE (CYberinfrastructure for COmparative effectiveness Research). CYCORE engages head and neck cancer (HNC) patients undergoing radiation treatment (RT) in the use of sensor and mobile technology to assess daily weight, blood pressure (BP)/pulse, and patient-reported outcomes (PROs, e.g., pain, nausea, dizziness, medication use, food/fluid intake). Clinicians reviewed data daily to identify early risk of dehydration, with the goal of early intervention to mitigate hospitalization and emergency room visits. We evaluated longitudinal quality of life (QOL) outcomes in patients randomized to use CYCORE during RT versus those randomized to usual care. Methods: HNC patients (n=357) completed the Functional Assessment of Cancer Therapy- Head & Neck (FACT-HN), which assesses QOL across several domains (physical, social/family, emotional, functional well-being) as well as HNC-specific outcomes. FACT-HN was completed at RT initiation (baseline), completion of RT (6-7 weeks post-baseline), and 8 weeks post-RT completion. Time point and group differences in QOL scores were evaluated using repeated measures ANOVA. Results: Mean age was 60 years (range 25-86), 21% were female, 85% were White, and 54% completed college. Baseline QOL mean scores were similar in patients randomized to CYCORE (n=169) or usual care (n=188). Mean scores on HNC-specific QOL outcomes and total scores were higher in the CYCORE group at 8 weeks post-RT completion (23.4 vs 22.1, p=.023; 61.8 vs 58.8, p=.049). Conclusion: HNC patients randomized to the CYCORE system during RT self-reported better QOL over time compared to those randomized to usual care. Sensor and mobile technologies can monitor patients' symptoms and related outcomes during critical periods of outpatient cancer treatment, can provide timely information to facilitate rapid clinical decision making about care, and may ultimately result in better QOL outcomes.

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O18.5

UNDERSTANDING THE INFLUENCES ON EARLY LUNG CANCER SYMPTOM PRESENTATION AND INTERVENTION PREFERENCES IN HIGH RISK GROUPS: A QUALITATIVE STUDY

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Background Lung cancer is the leading cause of cancer-related death worldwide. People at highest risk for lung cancer-current or former smokers, aged over 40 years, with serious lung comorbidity and living in areas of deprivation- are more likely to prolong presenting to a GP with symptoms, leading to advanced stage diagnosis. This qualitative study sought to understand the influences on early presentation with lung cancer symptoms in high risk individuals and intervention preferences. Methods Semi-structured interviews were conducted with 37 high risk individuals, recruited through GP practices in deprived areas of England, Scotland and Wales. A lung symptom attribution task was used to explore symptom

interpretations, symptom presentation action planning, and beliefs surrounding lung cancer, underpinned by Leventhal's Common Sense model. Focus groups with members of the public (n=2) and local stakeholders (healthcare professionals and community partners; n=2) were conducted to explore intervention preferences. Data were analysed using Framework. Results Interviews Participants perceived greater control over their short-term health (managing chest infections) than longer term health (preventing or detecting lung cancer). Chest infections were described as controllable through constant symptom monitoring leading to quick appraisal/detection and effective treatment with antibiotics. In contrast, lung cancer was considered inevitable but incurable, and participants anticipated refusing treatment. Focus groups Suggestions for intervention content included information to raise awareness of lung cancer symptoms, modify negative lung cancer beliefs and highlight the importance of earlier diagnosis. Multi-faceted interventions were suggested including talks and stands in community venues, led by a trained, non-judgemental facilitator. Conclusions Attributing lung symptoms to a 'treatable' cause means that high risk individuals manage their lung health in the short term, but potentially avoid/deny symptoms related to 'incurable' lung cancer. A multi-faceted is being developed to highlight lung cancer symptoms and the importance of early diagnosis.

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O20.6

CHANGING PARENT'S INFANT FEEDING BEHAVIOURS TO PREVENT CHILDHOOD OBESITY: IDENTIFYING IMPORTANT OUTCOME MEASURES

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Introduction and Purpose: Parent's infant feeding behaviours are implicated in the aetiology of childhood obesity. Lack of standardisation of behaviour change outcomes in trials of infant feeding interventions limits examination of intervention effects and mechanisms of change. Core outcome sets (COS) represent the agreed-upon minimum outcomes that should be measured in trials of a specific health condition. The aim of this research is to identify core infant feeding outcomes for children ≤ 1 year, to be evaluated in childhood obesity intervention trials. Methods: Identification of core infant feeding outcomes was conducted in the following stages: (1) systematic review identifying all infant feeding outcomes in the extant literature, (2) small group expert stakeholder meeting to clarify and discuss outcomes identified in the systematic review, (3) prioritisation of outcomes using the e-Delphi technique with an international panel of expert stakeholders. Stakeholders in stages 2 and 3 were: Researchers, Healthcare Professionals, Parents, and Childcare Professionals. Results: The systematic review identified 82 infant feeding outcomes. These were categorised into the following 9 outcome domains: 'breast and formula feeding', 'introduction of solids', 'parent feeding practices and styles', 'parent knowledge and beliefs', 'practical feeding', 'food environment', 'dietary intake', 'perceptions of infant behaviour and preferences', and 'child weight outcomes'. Outcomes were discussed and clarified with 13 stakeholders at the small group meeting and additional outcomes, not captured in the systematic review, were added at this stage. The e-Delphi study was completed by 169 international stakeholders. Thirty-three outcomes from 8 domains were identified as crucial for inclusion in the COS; no 'practical feeding' outcomes were considered crucial for inclusion. Conclusions: The COS development process facilitated identification of 33 outcomes considered essential by expert stakeholders for inclusion in trials of infant feeding interventions to prevent childhood obesity. Identification of core infant feeding outcomes is necessary to inform development and standardised evaluation of future trials of infant feeding interventions to prevent childhood obesity.

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O24.4

A STRUCTURAL EQUATION MODEL OF HIV-RELATED STIGMA, POSITIVE COPING, AND PERCEIVED STRESS AMONG PEOPLE LIVING WITH HIV AND DEPRESSION

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Introduction & Purpose: Studies indicated that perceived stress among people living with HIV (PLWH) was associated with severe mental health problems, reduced quality of life, and high risk behaviors. HIV-related stigma among PLWH is widespread in China. HIV-related stigma and positive coping are associated with perceived stress, yet few studies have

examined the mediating effect of positive coping between HIV-related stigma and perceived stress. Baseline data from a randomized controlled trial using mHealth intervention were analyzed to examine the association between HIV-related stigma and perceived stress and the mediating effect of positive coping so as to provide evidence for future intervention. Methods: A randomized clinical trial is underway in the only designated HIV treatment hospital in Guangzhou, China. Of 1555 PLWH approached and screened for depression with the Center for Epidemiological Studies Depression Scale (CES-D), 300 people living with HIV and depression (PLWHD) with CES-D≥16 were recruited. The Perceived Stress Scale (PSS), the HIV Stigma Scale (HSS), and the Simplified Coping Style Questionnaire (SCSQ) were used to measure perceived stress, HIV-related stigma, and positive coping, respectively. Structural equation modeling (SEM) was used to examine the direct and indirect associations between HIV-related stigma and perceived stress. Mediating effect of positive coping was also examined in the SEM. Results: Of the 300 participants, 277(92.30%) participants were male, and the average age of PLWHD was 28.21(SD=5.83) years. The rates of low stress (0≤PSS≤13) and moderate stress (14 ≤PSS ≤26) and high perceived stress (27 ≤PSS ≤40) were 6.3%, 85.3% and 8.3%, respectively. As hypothesized, results indicated that HIV-related stigma had significantly direct (0.293, C.I.: 0.19~0.39) and indirect effects (0.04, C.I.: 0.00~0.08) on perceived stress. Moreover, positive coping mediated the positive relationship between HIV-related stigma and perceived stress. Higher levels of HIV-related stigma were associated with lower levels of positive coping, which in turn were associated with higher levels of perceived stress. The model fit the data well after controlling for covariates of age and years of HIV infection (Chi-Square=40.98, RMSEA=0.062, CFI=0.971, TLI=0.959, SRMR=0.049). Conclusions: PLWHD experienced a higher level of perceived stress. The results suggest that positive coping can buffer the negative impact of HIV-related stigma on perceived stress. Findings highlight the need for multilevel interventions to reduce HIV-related stigma and enhance positive coping so as to improve psychological wellbeing of PLWHD.

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O24.6
A STRUCTURAL EQUATION MODEL OF HIV-RELATED STIGMA, PERCEIVED STRESS, AND SUICIDAL STATUS AMONG PEOPLE LIVING WITH HIV AND DEPRESSION IN CHINA

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Introduction: People living with HIV (PLWH) suffer from severe HIV-related stigma and face various stressors. Previous studies indicated that HIV-related stigma and perceived stress were positively associated with suicidal status (suicidal ideation and/or suicidal attempts), yet few studies explored the mechanisms among these three concepts. The current study examined the mediating effect of perceived stress from HIV-related stigma to suicidal status in people living with HIV and depression (PLWHD) in China using structural equation modeling (SEM). Methods: An ongoing randomized controlled trial using mHealth (mobile health) intervention to improve mental health of PLWHD started in August, 2017 in Guangzhou, China (n=300). Participants were interviewed on their HIV-related stigma (HIV Stigma Scale), perceived stress (Perceived Stress Scale), suicidal status, and socio-demographic characteristics at baseline. SEM was performed to examine the pathways from HIV-related stigma and perceived stress to suicidal status controlling for covariates (including employment, years of HIV infection, and affordability of daily or medical expenses) which were significantly associated with suicidal status. Results: At baseline, 44% (132/300) PLWHD reported suicidal ideation and 9.6% (29/300) PLWHD reported suicidal attempts in the last three months, resulting in 45% (135/300) PLWHD in suicidal status. Results of SEM showed a good model fit (Chi-square=27.81, CFI=0.96, RMSEA=0.04, WRMR=0.85). In the SEM, HIV-related stigma had significantly direct (pathway coefficient=0.16, C.I.: 0.00~0.32) and indirect (pathway coefficient=0.08, C.I.:0.01~0.15) effects on suicidal status. Perceived stress partially mediated the positive relationship between HIV-related stigma and suicidal status (pathway coefficient=0.21, C.I.:0.01~0.24). Conclusion: The rate of suicidal status among PLWHD was high. PLWHD who experienced elevated HIV-related stigma and perceived stress were more likely to have suicidal ideation and attempts. To reduce suicidal status of PLWHD, targeted intervention to reduce HIV-related stigma and perceived stress are warranted.

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O26.2
IMPACT OF LONG-TERM DISORDERS ON CANCER SCREENING UPTAKE: A MIXED METHODS APPROACH

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Introduction & Purpose: Worldwide there are disparities in cancer screening uptake, even among countries such as the UK where cancer screening is offered at no cost to the individual. While socioeconomic disparities have been well-described, little research has considered disparities in cancer screening uptake associated with long-term disorders and co-morbidity. The purpose of this work was to examine the impact of co-morbidity and long-term disorders on cancer screening uptake. Methods: Phase 1 - data on breast, cervical and colorectal screening invitations and attendances for women aged 50-60 in the Greater Glasgow and Clyde Health Board during 2009-2013 were linked to demographic data, hospital discharge records, prescribing data, and GP Local Enhanced Service data. Co-morbidity was assessed using a Charlson Index of co-morbidity and long term antidepressant use was assessed by prescribing data. Data were analysed using logistic regression. Phase 2 examined why women (n=59) chose to participate in none, some or all screening programmes including the impact of long-term disorders using qualitative interviews with a purposive sample of women identified through the Phase 1 dataset. Framework analysis was used. Results: Phase 1 - 68,234 women were eligible for all three cancer screening programmes. Uptake between 2009-2013 was 75.8% for breast, 83.8% for cervical and 64.8% for colorectal. Among women with long term antidepressant use uptake was lower at 70.6%, 65.8% and 57.5%, respectively. Women with multi-morbid illness had lower uptake across all three cancer screening programmes. Phase 2 – women described that existing long-term physical disorders meant they felt unable to cope with the prospect of additional treatment should an abnormality be detected at screening. Anxiety prevented some from deciding for or against cancer screening. Among a few, depression and suicidality let cancer seem to be an easier or blameless way to die, which negated any perceived need for cancer screening. Conclusions: Co-morbidity and long-term disorders were associated with lower uptake of breast, cervical and colorectal cancer screening. Combining the quantitative and qualitative methods provided a greater understanding which can inform the development of future interventions.

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O28.6
CHRONIC STRESS AND GENETIC SUSCEPTIBILITY TO OBESITY IN U.S. HISPANIC/LATINOS. PRELIMINARY RESULTS FROM THE HISPANIC COMMUNITY HEALTH STUDY/STUDY OF LATINOS (HCHS/SOL)

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Introduction: Prior research shows associations between psychosocial stress and obesity, but few studies take account for underlying genetic susceptibility to obesity. Genome-wide association studies (GWAS) have identified several single nucleotide polymorphisms (SNPs) associated with BMI and obesity; however, gene-environment interactions of psychosocial factors have been less explored. In this study, we examined the relative contributions of chronic stress and obesity genetic risk score, as well as their interaction, in relation to BMI and obesity in a diverse sample of Hispanic/Latino adults. Methods: The study includes 7162 participants (56% female; mean age 50 years) from the second examination of HCHS/SOL, a population-based cohort conducted in four US cities (Bronx, NY; Chicago, IL; Miami, FL; San Diego, CA) that included participants of Mexican, Cuban, Puerto Rican, Dominican, Central and South American ancestries. Chronic stress was assessed by the chronic stress burden scale, which asks about stressors lasting more than 6 months in major life domains (financial, health, work). Genetic risk score (GRS) was derived by summing the risk alleles of 97 known BMI-associated SNPs previously identified. Analyses were adjusted for the complex sampling design, site, ancestry, relatedness, age and sex. Results: Only 25% of participants reported no chronic stressors, 45% had 1-2, and 30% had $\geq$ 3 stressors. Mean BMI was 30 kg/m2 (SE=.12). Both chronic stress and genetic risk score were associated with higher BMI and obesity. The adjusted regression model showed that each unit increase in chronic stress was related to 0.35 (0.04) increase in BMI (p< 0.001) and each unit increase in GRS was associated with a 0.69 increase in BMI (p< 0.001). However, the interaction between stress and GRS was not significant. Chronic stress explained 1.37% of the BMI variance and GRS explained 0.97%. Participants with a higher number of chronic stressors had higher odds of obesity (OR=1.11; 95% CI 1.08,1.14) and higher GRS was also associated with obesity (OR=1.24,95% CI 1.18,1.3). Conclusions: Although associations were small, chronic stress significantly related to BMI and obesity in Hispanic/Latinos adults, even after controlling for underlying genetic susceptibility.

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O29.4

IMPACT OF EMBEDDING A HEALTHY LIFESTYLE CLINICIAN IN A COMMUNITY MENTAL HEALTH SERVICE TO ADDRESS THE HEALTH RISK BEHAVIOURS OF CLIENTS

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Introduction & purpose: Compared to the general population, persons with a mental illness experience higher morbidity and mortality from chronic diseases, contributed to by a higher prevalence of health risk behaviours, including: tobacco smoking, poor nutrition, harmful alcohol consumption and physical inactivity. Clinical practice guidelines recommend that mental health services routinely address these risk behaviours by assessing level of risk, providing brief advice to improve behaviours and referring at-risk clients to specialist behaviour change supports, such as telephone based support services. However, provision of this recommended preventive care is consistently reported to be low. This study aims to assess the impact of allocating a clinician within one community mental health service to the specific role of addressing clients' risk behaviours. Methods: A randomised controlled trial was conducted within one community mental health service in New South Wales (NSW), Australia. Clients (n=811) were randomised to receive either usual care (control group) or usual care plus the offer of an additional face-to-face appointment and follow-up telephone call with a 'healthy lifestyle clinician' (intervention group). Telephone interviews were undertaken at baseline and a one-month follow-up to assess participants' receipt of preventive care from the mental health service (assessment, advice & referral/s). Results: One third of clients allocated to the intervention attended the additional appointment with the healthy lifestyle clinician. Preliminary intention to treat analyses indicate significantly greater improvements between time points for the intervention group for the receipt of assessment (for nutrition, p=.026; for alcohol, p=.045), advice (for nutrition, p=.006) and referral to the NSW Get Healthy Information and Coaching service (p=.001). Conclusions: These results represent preliminary evidence for the effectiveness of the healthy lifestyle clinician role and suggest a model of preventive care provision which might be successfully implemented within mental health services.

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O30.5

PREGNANCY INTENTIONS, HEALTH-RELATED LIFESTYLE BEHAVIOURS, AND PSYCHOLOGICAL WELLBEING: A SYSTEMATIC MAPPING REVIEW OF THE LITERATURE

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Introduction and Purpose: Suboptimal lifestyle behaviours and psychological wellbeing before and during pregnancy are associated with a host of adverse maternal and infant outcomes, including obesity. Pregnancy intentions are an important consideration in understanding motivations for maternal behaviour change. The aim of this study was to conduct a systematic mapping review of the literature that explored associations of pregnancy intentions with health-related lifestyle behaviours and psychological wellbeing before and during pregnancy. Methods: In May 2017, six medical/health databases were searched for quantitative studies exploring the association between pregnancy intention and psychological wellbeing and/or health-related lifestyle behaviours preconception or during pregnancy. Results: The search retrieved 19,430 articles, 818 full-text articles were assessed for eligibility. 312 articles were included, involving 2,656,228 participants; median sample size was 913. Preconception pregnancy intentions: Only 25 studies prospectively measured pregnancy intentions during the preconception period. 108 studies considered associations between preconception pregnancy intention and behaviours/psychological wellbeing, including supplement use (k=62), alcohol use (k=37) and smoking (k=32). Preconception weight-related lifestyle behaviours were assessed in relation to pregnancy intention in only 16 studies; 8 studies assessed psychological wellbeing. Pregnancy intentions when already pregnant: 240 studies considered associations between pregnancy intention in women already pregnant and behaviours/psychological wellbeing, including prenatal care (k=81), antenatal depression (k=62), smoking (k=58), and alcohol use (k=44). Weight-related lifestyle behaviours were uncommon (exercise/physical activity k=2; nutrition k=5). Conclusions: This literature is

hampered by the limitations associated with retrospective assessment of pregnancy intention. Despite the large volume of studies, there are obvious gaps in the literature. Future research should focus on prospectively assessed pregnancy intentions in addition to preconception weight-related lifestyle behaviours such as dietary and physical activity behaviours, as these are key modifiable risk factors for maternal obesity.

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O31.1
DO MUSCULOSKELETAL CONDITIONS INCREASE THE RISK OF CHRONIC DISEASE: A SYSTEMATIC REVIEW AND META-ANALYSIS OF COHORT STUDIES

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Introduction & Purpose: A growing body of research shows that musculoskeletal conditions are associated with chronic diseases. A suggested mechanism for this relationship is that musculoskeletal conditions contribute to the development of other chronic diseases. For example, pain and disability may limit physical activity and subsequently increase the risk of obesity, cardiovascular disease, diabetes, or cancer. We undertook a systematic review to investigate the causal relationship between common musculoskeletal conditions (neck and back pain, and osteoarthritis of the knee or hip) and chronic diseases (cardiovascular disease, cancer, diabetes, chronic respiratory disease and obesity). Methods: We searched relevant databases up to November 2016 and identified longitudinal cohort studies that estimated a temporal association between the prevalence of musculoskeletal conditions (neck or back pain, and osteoarthritis of the knee or hip) at baseline and chronic disease (cardiovascular disease, cancer, diabetes, chronic respiratory disease and obesity) throughout follow up. Risk of bias was assessed using a modified version of the QUIPS tools. We pooled adjusted hazard ratios and incidence rate ratios, using random-effects meta-analyses. We conducted subgroup analyses separated by musculoskeletal conditions and by outcome where possible. Results: We identified 13,736 articles of which 16 articles reporting on 11 studies met the inclusion criteria. The primary meta-analysis included data from 10 studies and 2,669,751 persons. Cardiovascular disease was the outcome in 9 studies and cancer in 1 study. Two studies measured back pain as the exposure and eight measured osteoarthritis. The primary meta-analysis revealed a statistically significant increase in the risk of developing 'chronic disease' in those reporting musculoskeletal conditions at baseline (HR= 1.18; 95% CI, 1.13 to 1.22; I2 57%). Subgroup analysis by condition revealed a similar result for osteoarthritis and chronic disease. No meta-analysis was performed for back pain. The two studies of back pain found people with back pain had an increased risk of cardiovascular disease (HR=2.13; 95% CI, 1.32 to 3.44) and 10-year incidence of cancer (IRR= 1.25; 95% CI, 1.19 to 1.32). Conclusions: Patients with musculoskeletal conditions have an increased risk of subsequent chronic disease. Effective treatment of musculoskeletal conditions and comorbid lifestyle risks, such as inadequate physical activity, may play a role in preventing other chronic diseases.

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O33.3
TITLE: A SCHOOL-BASED GAMIFICATION STRATEGY TO REDUCE OBESITY: RESULTS FROM A PILOT STUDY

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School-based interventions have shown mixed results. Most studies have lacked enough statistical power and have been carried out in North America and Europe. Multidimensional interventions have often used education to address nutrition and physical activity, without structural components and weak community participation. In this study, we report the results of the gamification strategy and effectiveness of a pilot study in Santiago de Chile. Methods: The Juntos Santiago cluster-randomized trial uses a gamification strategy (i.e. elements of a game, points, levels and rewards) with a strong community participation component. Participants of the pilot study were 381 children in 5th and 6th grade of three schools in Santiago selected by convenience. Children voted their enrolment and collectively chose the activity reward they were playing for. The intervention consisted of a healthy snacks challenge and a

steps challenge. The reward for the pilot was a fun day at the City swimming pool. The primary outcome was change in BMI zscore and waist circumference. Results: Of enrolled students, 88% was examined at baseline and follow-up. Unhealthy snacks brought from home reduced by 6.5 percentage points. Data from steps challenge was not available due to encryption of activity trackers. We observed statistically significant reductions in zBMI (-0.09) and waist circumference (-0.79 cms). No difference was observed for BMI. Systolic blood pressure reduced on average 5.19 mmHg and diastolic blood pressure increased by 1.48 mmHg. The latter changes are likely due to equipment change. Results of the 2018 trial in 4000 participants will also be presented. The trial in 2018 will incorporate a points system and structural rewards (improvements in school infrastructure for physical activity and nutrition). Conclusions: Despite the short duration of the pilot study, results are promising. The gamification strategy appears to foster community engagement and motivation. Attention should be given to data extraction and quality assurance prior the beginning of the trial in 2018.

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O34.6
"IT'S LIKE TRYING TO FIT A PIECE INTO AN ALREADY NOT WORKING PUZZLE": NON ADHERENCE TO INHALED CORTICOSTEROIDS IN YOUNG PEOPLE WITH PROBLEMATIC ASTHMA: A QUALITATIVE STUDY

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Sub-optimal adherence to inhaled corticosteroids (ICS) leads to poor asthma control and exacerbations. Even while adherence is electronically monitored, over half of patients have adherence to ICS of <80%. No previously published research has used objective electronic monitoring device (EMD) data to qualitatively investigate nonadherence. This study aimed to investigate determinants of nonadherence using EMDs. Methods: Patients aged 12-17 years old with poor adherence to ICS (<80%) attending the Royal Brompton Hospital, took part in semi-structured interviews using their EMD data. The interview discussion guide was based on relevant adherence frameworks including the

Perceptions and Practicality Approach. Interviews were transcribed and thematic analysis was conducted. Results: 20 patients were recruited, mean age of 14 years (range=12-17). Using thematic analysis five key themes emerged: Importance of parental encouragement and reminders; Trivialisation of the seriousness of asthma; Poor understanding of asthma as a long-term condition; Low necessity beliefs for ICS use daily in the absence of symptoms; and Difficulties in maintaining routine. Conclusion: Young people with PSA have complex beliefs related to the use of ICS. They and their families need to recognize asthma as severe and as a long-term condition. Interventions should focus on effective ways of communicating the nature of asthma and the need for daily preventer usage in the absence of daily symptoms and on shifting the reliance from the reliever to the preventer inhaler. Adherence support should be tailored to address both the motivation and the ability of the patient.

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O36.5
THE PAIN COURSE: EVIDENCE OF EFFECTIVENESS OF AN ONLINE CBT PAIN MANAGEMENT PROGRAMME IN A RANDOMIZED TRIAL IN IRELAND

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Background. Despite the demonstrated efficacy of cognitive behavioral therapy (CBT) in the treatment of people with chronic pain, access to these effective, evidence-based interventions is limited. Internet-based CBT (iCBT) has emerged as an innovative approach to address these treatment barriers. One such internet-delivered psychological pain management programme, the Pain Course, was developed and empirically tested in Australia. The Pain Course is a clinician guided iCBT programme for adults with chronic pain and the aim of the current study was to evaluate the efficacy of this intervention in a sample of Irish adults with chronic pain. Methods. Following a pilot study to confirm the cultural suitability of the program, 133 individuals were randomly assigned to either a Treatment Group or wait-list Control Group. The Pain Course programme was a cognitive behaviour therapy

intervention comprising five internet-delivered lessons, released sequentially over an 8 week period. The programme also included homework tasks, additional resources, weekly contact with a clinician via e-mail or telephone, and automated e-mails. The primary outcome was pain-related disability as measured by the Roland Morris Disability Questionnaire (RMDQ). The secondary outcomes were depression, anxiety, pain severity, self-efficacy, fear of movement, pain impact, pain acceptance, and treatment satisfaction. The online measurements were conducted prior to the commencement of the Course and nine weeks after the start of the Course. Results. In terms of lesson completion, 80% of the Treatment Group completed all five lessons. Improvements were significantly greater for Treatment Group participants compared to Control Group participants in levels of disability, anxiety, depression, and average pain levels at posttreatment. Over 80% of participants rated the programme as highly acceptable. Overall, the clinician spent a total mean time of 83.4 min contact time per patient throughout the programme. Conclusion. The findings of the study suggest that a brief iCBT intervention is clinically effective, acceptable to patients, and efficient in terms of therapist contact time. The findings add to the existing literature and are broadly in line with previous trials of the Pain Course.

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O40.1

DOES WEIGHT STATUS MEDIATE THE INFLUENCE OF CARDIORESPIRATORY FITNESS ON CLUSTERED CARDIOVASCULAR DISEASE RISK FACTORS IN YOUTH? A MEDIATION ANALYSIS STUDY.

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Introduction and Purpose: The precursors of cardiovascular disease (CVD) are already present from an early age and the detection of risk factors in this stage of life might help to prevent the development of CVD in adulthood. High levels of cardiorespiratory fitness (CRF) in youth are associated with a cardiovascular health profile and it is a strong predictor of CVD risk factors later in life. However, whether CRF levels exert a direct effect on CVD risk factors, or if this association is mediated by weight status in youth, has not been fully defined. We examined the individual and combined associations of CRF and body mass index (BMI) with clustered CVD risk factors, and the mediator role of BMI in the association between CRF and clustered CVD risk factors in youth.

Methods: 497 youth (231 girls) aged 6-17.9 years were included in this cross-sectional study. Height and weight were assessed and BMI was calculated. A CVD risk factor index (CVDRF-I) was computed using the standardized values of: waist circumference, systolic blood pressure, triglycerides, high-density lipoprotein cholesterol and glucose. CRF was assessed using the 20-m shuttle run test. Mediation hypothesis was tested through Baron and Kenny procedures.

Results: CRF was negatively associated with CVDRF-I (all p <0.05); however after adjusting for BMI the associations were no longer significant either in children or adolescents of both sex groups. In contrast, the association between BMI and CVDRF-I was independent of CRF (all p <0.001). The effect of CRF on CVDRF-I was mediated by BMI. The percentage of the total effect of CRF on CVDRF-I mediated by BMI for children boys and girls and adolescents boys and girls were 79.5%, 100%, 81.2% and 55.7%, respectively. Similar results were found when we performed analyses removing waist circumference from CVDRF-I. We also repeated all analyzes using the percentage of body fat instead of BMI as a measure of adiposity and the results persisted.

Conclusions: BMI is an independent predictor of CVDRF-I and a mediator of the association between CRF and CVDRF-I in youth. Exercise programs aiming at preventing future CVD should focus on maintaining an optimal weight status, what might be attained by increasing CRF levels.

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O48.6

ADAPTATION AND VALIDATION OF A QUESTIONNAIRE TO MEASURE STIGMA TOWARD MENTAL ILLNESS AMONG HEALTH PROFESSIONALS WORKING IN PRIMARY CARE IN CHILE.

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Introduction & Purpose: Stigma toward the mentally ill is a global problem and one of the main obstacles to the better integration of mental health (MH) into primary health care (PHC). The purpose of this study is to adapt and validate an instrument to measure stigma among PHC providers in Chile. Given there are no well validated instruments to measure stigma among PHC in Chile, an alternative is to adapt measures from other countries with special attention to socio-cultural aspects. Methods: The first step was the translation and back-translation of a questionnaire that was specially built to measure stigma in PHC workers in Canada (Kassam et al, 2012): the Opening Minds Scale for Health Care Providers. This instrument was selected because its focus coincides with the objectives of this project, for ease of application and its good psychometric properties. A standard procedure was followed, based on WHO (2014) recommendations for this kind of need. The translated version was revised by a group of experts, for the analysis of its content and context validity. Subsequently, it was applied to a sample of 20 PHC professionals for semantic analysis of their validity. Finally, the adapted version was conducted among 830 PHC professionals in 32 PHC Centres across the country (North, Centre and South of the country; urban and rural areas). A psychometric analysis of the instrument was performed, including a study of its dimensions (factorial analysis of principal components) of its internal consistency (Cronbach's alpha for its size) and its concurrent validity (evaluating the correlation of scores with another widely used questionnaire for stigma among health providers: Mental illness: clinicians' attitudes (MICA) scale (Kassam et al., 2010)). Results: The final Spanish version of the instrument is presented. Main aspects of the translation and adaptation process are shared focused on five types of equivalence between original and translated instruments (Flaherty et al. , 1988): (1) Content ; (2) Semantic; (3) Technical; (4) Criterion; and (5) Conceptual. Finally, the results of the psychometric analysis of the instrument, including a study of its dimensions (factorial analysis of principal components) of its internal consistency and its concurrent validity are presented. Conclusions: This is the first National study to validate a questionnaire to measure stigma toward people with mental illness in PHC in Chile. It represents a fundamental step in order to (1) assess the stigma characteristics toward mental illness among PHC professionals in the Chilean public health system, and (2) to measure the effectiveness of interventions reduce stigma in this context.

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P013

EFFECTS OF THREE LEVELS OF PSYCHOSOCIAL INTERVENTION ON THE NEED FOR PSYCHIATRIC CARE AMONG PATIENTS HOSPITALIZED FOR A STEM CELL TRANSPLANTATION

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Over half of patients with hematologic malignancies who are treated with hematopoietic stem cell transplantation (HSCT) report clinically significant psychological symptoms which require psychopharmacological management during the HCST hospital stay. AIM: To evaluate the effect of three levels of psychological intervention on the need for psychiatric care during the HSCT hospital stay. METHOD: Quasi-experimental study comparing need for psychiatric care in three groups: (First) HSCT patients in 2016 who completed a semi-structured clinical interview and self-report measures of psychological symptomatology (which could lead to a brief individualized cognitive-behavioral intervention); (Second) Patients in 2012 who participated in a cognitive-behavioral intervention involving the same techniques for everyone (psychoeducation and progressive muscle relaxation training before hospitalization), and (Third) historical matched control patients in 2014 who only completed a unstructured clinical interview. Need for psychiatric care was determined by: (a) psychiatric consultation (the decision was responsibility of the physician or the head nurse) for moderate to high psychological symptoms like anxiety, depression or insomnia interfering with the medical treatment and/or (b) receive pharmacological treatment. PARTICIPANTS: 78 patients were included in the study, 33 in the first group (12 allogeneic HCST and 21 autologous HCST; mean age=41 years [SD=14]; 54.5% male, 63.6% married), 14 in the second group (2 allogenic HCST and 12 autologous HCST; mean age=43.6 years [SD=15]; 50% male, 43% married), and 31 in the third group (11 allogeneic HSCT and 20 autologous HSCT; mean age=43 years [SD=13]; 54.8% male; 58.1% married). RESULTS: Fewer patients in the first group required either psychiatric consultation (21.2% vs.

35.7% vs. 54.8%; x2(2)=7.75, p=.02) or psychopharmacological treatment before HSCT (18.2% vs. 21.4% vs 51.6%; x2(2)=9.08, p=.01) or during the hospital stay (24.2% vs 28.6% vs 61.3%; x2(2)=10.05, p<.01) as compared to group two and three. CONCLUSION: Lower need for psychiatric care was observed when patients were systematically evaluated and clinicians expressly identified patient's intervention needs.

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P071

REDUCING WAITING TIME AND RAISING OUTPATIENT SATISFACTION IN A CHINESE PUBLIC TERTIARY GENERAL HOSPITAL-AN INTERRUPTED TIME SERIES STUDY

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Introduction and Purpose: It is globally agreed that a well-designed health system deliver timely and convenient access to health services for all patients. Many interventions aiming to reduce waiting times have been implemented in Chinese public tertiary hospitals to improve patients' satisfaction. However, few were well-documented, and the effects were rarely measured with robust methods. This study assess changes in levels and trends of waiting times before and after the introduction of waiting time reduction interventions in a tertiary public hospital in Southern China. Methods: We analyzed longitudinal time series data using a segmented linear regression model to assess changes in levels and trends of waiting times before and after the introduction of waiting time reduction interventions. Around an average of 60,000 outpatients and 70,000 prescribed outpatients per month were targeted for the study during Oct 2014-February 2017. Pearson correlation analysis was conducted to indicate the strength of association between waiting times and patient satisfactions. The statistical significance level was set at 0.05. Results: The monthly average length of waiting time decreased 3.49 min (P =0 .003) for consultations and 8.70 min (P =0 .02) for filling prescriptions in the corresponding month when respective interventions were introduced. The trend shifted from baseline slight increasing to afterwards

significant decreasing for filling prescriptions (P =0.003). There was a significant negative correlation between waiting time of filling prescriptions and outpatient satisfaction towards pharmacy services (r = −0.71, P =0 .004). Conclusions: The interventions aimed at reducing waiting time and raising patient satisfaction in Fujian Provincial Hospital are effective. A long-lasting reduction effect on waiting time for filling prescriptions was observed because of carefully designed continuous efforts, rather than a one-time campaign, and with appropriate incentives implemented by a taskforce authorized by the hospital managers. This case provides a model of carrying out continuous quality improvement and optimizing management process with the support of relevant evidence.

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P086

IMPACT OF COGNITIVE BEHAVIORAL THERAPY (CBT) ON INTERVENTION OF BREAST CANCER PATIENTS' RELATED PSYCHOLOGICAL BEHAVIOUR

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Introduction & Purpose: The purpose of the study is to explore the impact of CBT on emotional status, quality of life and quality of sleep of breast cancer patients. Method: There were 93 breast cancer patients meeting the study criteria have been sampled by convenience in the survey. Moreover, all the participants have been divided into three groups randomly. Participants who underwent 3 months CBT were organized into a group called psychological intervention group (n=23), participants only accepted postoperative health care education were organized into a group called clinical management group (n=24) and participants carried out any intervention activities were organized into a group called the comparison group (n=46). In this study, Hamilton Depression Rating Scale, Hamilton Anxiety Rating Scale, Athens Insomnia Scale and Functional Assessment of Cancer Therapy-Breast were utilized during each intervention. All the data have been assessed by repeated measures analysis of variance. Result: After psychological intervention, the level of depression and anxiety in psychological intervention group is lower than clinical management group and comparison group. The QoL in psychological intervention group is higher than clinical management group and comparison group. Insomnia symptoms in psychological intervention group relieve better than clinical management group and comparison group. All the results have

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statistics significance(P<0.05). Conclusion: CBT can efficiently improve depressive and anxious status emotion, insomnia issue and QoL of breast cancer patients.

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P133
FIRST CONSENSUS OF CHILEAN BARIATRIC PSYCHOLOGISTS ABOUT MENTAL HEALTH MANAGEMENT PRE AND POST-BARIATRIC SURGERY.

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INTRODUCTION & PURPOSE: Bariatric surgery is the most effective and lasting alternative to weight reduction and improved general health. However, long-term weight maintenance after surgery may be challenging for some patients. Thus, multidisciplinary teams should be involved in the evaluation, treatment, and post-operative support. With the purpose of unifying criteria about mental health aspects, a scientific-based consensus was elaborated. METHODS: all members of the NPCO – Chilean Bariatric Psychologists, part of Chilean Bariatric and Metabolic Society were invited to participate, representing teams from 8 different regions throughout Chile. A questionnaire including the most important topics, such as preoperative contraindications, psychological risk factors of weight regains, postoperative support, was designed and sent to 50 national experts. When no agreement among them was achieved, the Delphi methodology was applied. Scores of 86% or greater were used for inclusion consensus. The recommendations here presented were widely discussed in several scientific meetings with active participation of all members of the group and were highly based on scientific evidence covered by the literature. CONCLUSIONS: The main conclusions reached are that clinical findings are critical for the preoperative diagnosis and treatment adherence. The purpose of the psychological assessment has shifted from identifying contraindications for bariatric surgery and evolved towards assessing psychological and behavioral readiness. The achievement of pre-surgery preparatory behavioral changes are recommended to optimize their postoperative outcomes. Acquisition of a healthy lifestyle is the most important therapeutic tool for long-term weight maintenance. Thus, therapeutic postoperative support is fundamental. The psychologist undertaking the assessment needs specific experience and knowledge of bariatric surgery, as well as the preoperative and postoperative issues that may arise. There are specific recommendations for adolescents as this group presents special needs according to their development stage.

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P154
THE DIRECT MEDICAL ECONOMIC BURDEN OF HEALTH CARE–ASSOCIATED INFECTIONS IN PUBLIC TERTIARY HOSPITALS IN HUBEI PROVINCE, CHINA

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Introduction and Purpose: Antimicrobial resistance (AMR) has increasingly become a global threat to human health. Healthcare associated infections (HAIs) is one important factor associated with AMR along with overuse of antibiotics. This study estimated the attributable direct medical economic burden of health care–associated infections (HAIs) in China, aimed to inform hospital managers and policy makers about the potential reduction of direct medical economic burden from better control of HAIs, as well as some policy implications for future actions. Methods: Data were extracted from hospitals' information systems. Inpatient cases with HAIs and non-HAIs were grouped by the propensity score matching (PSM) method. Attributable hospitalization expenditures and length of hospital stay were measured to estimate the direct medical economic burden of HAIs. Attributable hospitalization expenditures and length of hospital stay STATA 12.0 was used to conduct descriptive analysis, bivariate χ2 test, paired Z test, PSM (r = 0.25σ, nearest neighbor 1:1 matching), and

logistic regress analysis. The statistically significant level was set at 0.05. Results: The annual HAIs prevalence rate (based on PPS) is 2.69%, which is much higher than the annual HAIs rate (based on voluntary reporting) of 0.82%. The HAIs group had statistically significant higher expenditures and longer hospitalization stay than the non-HAIs group during 2013 to 2015 (P<0.001). The annual average HAI attributable total expenditure, medicines expenditure, out-of-pocket expenditure, and number of hospitalization days per inpatient were (2015 US$) 6173.02, 2257.98, and 1958.25 and 25 days during 2013 to 2015. The direct medical cost savings was estimated at more than 2015 US$12 billion per year in Chinese tertiary hospitals across the country. The results show a dramatic increase in 2014 and a slight decline in 2015. The differences of all measurements are statistically significant (P <0.001). Conclusions: The significant attributable direct medical economic burden of HAIs calls for more effective HAI surveillance and better control with appropriate incentives. There is ample room for improvement in China and the direct medical economic burden of HAIs can be decreased through better prevention, control, and management.

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EFFECTS OF PAST PHYSICAL ACTIVITY (AGED 13-18 YEARS) ON LATER LIFE IN ADULT HOOD OF JAPANESE WORKER

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Introduction: The relationship between SOC and exercise habit is not clear under the condition that was defined as exercising at least twice a week for 30minutes per bout, for more than one year as an exercise habit (Urakawa et al: ICBM 2014, Groningen). Therefore,we decided to study that not only the current exercise practice but also the exercise habits need to be taken as past health factors inthe time axis of ours life from birth. The objective of this study is to examine the relationship of past physical activity (aged13 to 18years) and psychological factors and medical checkups, BMI, smoking habits, etc. Methods: Self-administered questionnaires weredistributed among 467 workers of a company in Tokyo and 457 agreed to participate in this study that recovered by mail during 2013.The questionnaires included questions on demographic variables and past physical activity (aged 13-18 years) of subjects who refers toasked the question item "Do you think about your physical activity habits during 13 to 18 years old who moved a lot compared

to other people?", and answers is 1 = "I do not think so at all" 2 = "I do not think so much" 3 = "Somewhat agree" 4 = "I think so" 5 = "I think sovery much". Results: They consisted of males (90.6%) and 43 females (9.4%), with average ages of 42.1(SD 10.4) and 38.5 (SD 10.8)years. Comparing the difference in mean values between two groups of past physical activity habits (inactive: n = 132, active: n = 325)(one-way analysis of variance), the active group has better SOC scores (p < 0.05) and self-esteem score was high (p < 0.01).Relationships were found between past physical activity habits and current smoking habits (smoking: n = 164, quit: n = 114, no-smoking:n = 179) (p < 0.01) (chi-square test). Result of regression analysis with male only 414, self - esteem scale scores as objective variables,self-esteem is affected by SOC scores (β = 0.452, p < 0.000), Depression Scale Score (CES-D) (β = -0.198, p < 0.000), past physicalactivity habits (β = 0.115, p < 0.01), age (β = 0.100, p = 0.011) (SPSS Ver. 23 stepwise method). Conclusions: Those who recalled thetime at the age of 13 to 18 and responded that the physical activity was high compared with others suggested that the SOC and selfesteemas stress-coping ability tended to be high.

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REASONS FOR ANXIETY ABOUT HEALTH EFFECTS CAUSED BY RADIATION AMONG COMMUNITY RESIDENTS IN FUKUSHIMA AFTER THE GREAT EAST JAPAN EARTHQUAKE: A QUALITATIVE STUDY USING TEXT MINING

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Introduction: Community residents in Fukushima prefecture suffered tremendous damage from the Great East Japan Earthquake. They have also suffered from anxiety about adverse effects of radiation due to the Fukushima Daiichi nuclear power plant accident. It is almost 7 years from the earthquake, expected that their feelings may change compared to those at

the time. The aim of this study was to explore reasons for change of anxiety about health effects caused by radiation. Methods: A total of 2,246 adult community residents in Fukushima prefecture were recruited through 2017 and 2018, from an existing cohort. The participants were asked to complete a self-reported questionnaire. Change of anxiety about health effects caused by radiation was measured by one item rated on a 5-point Likert scale (1=decreased to 5=increased). Reasons for the change were also collected in free writing. The text mining method was adopted to analyze reasons for change of anxiety, conducting morphological analysis and extracting words (nouns and adjectives) from their free writing. After the extraction, clusters of the words were created by conducting principal component analysis and cluster analysis. Finally, correspondence analysis was conducted to investigate the relationships between the change of anxiety and the clusters of the words. The study protocol was approved by the ethical committee of the Department of Medicine, The University of Tokyo. Results: A total of 1,420 participants (63.2%) completed the questionnaire. Of 735 (51.8%) reported decrease of anxiety, 560 (39.4%) reported no change, and the other 56 (3.9%) reported increase. We analyzed 477 participants who reported the change of anxiety and its reasons without missing. From their writing, 134 words were distilled. As a result of correspondence analysis, some of the words that related the participants who reported decrease of the anxiety were "decrease," "radiation," "ordinary days," "safety," "media," "fading with time," "check," "foods," "evidence," and "association." Words that related increase of the anxiety were such as "data," "eye," "forward," "young," "cause," "stress," "dysfunction," and "nation." Conclusions: Decrease of the anxiety among the community residents in Fukushima may be because they confirmed the decrease of the amount of radiation, safety of the foods, and no associations between radiation and health. On the other hand, some of the residents may still feel increased anxiety due to invisibleness of radiation, adverse effects on their descendants, and actual changes on their own health.

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S01.4
HPV VACCINATION IN AN OPPORTUNISTIC SYSTEM: LESSONS FROM THE UNITED STATES

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Introduction & Purpose. In the US, HPV vaccination is part of the recommended national vaccination program, and is generally available for low or no cost, but provision is largely dependent on interactions between clinicians and patients. Vaccination is opportunistic, and provided primarily in medical settings. Vaccination is not typically provided in schools, and is mandatory for school entry without exemptions in only 1 of the 50+ US states and territories. Early research indicated that provider recommendation was the most important predictor of HPV vaccine utilization. We therefore conducted provider-focused education and training programs in 14 healthcare systems in diverse geographic locations to determine their impact on HPV vaccination rates. Methods. Providers and office staff participated in a structured program with four key components: (1) data collection and feedback, (2) education on HPV-related cancers, HPV vaccine effectiveness and safety, and recommended communication techniques, (3) quality improvement training and/or support, and (4) whole-staff involvement in choosing and implementing a clinic-wide action plan for improving HPV vaccination rates. Programs ran over 6-9 months. Physicians received mandatory credits for maintaining specialty licensure for participating in the program. Results. Individualized data collection allowed identification of clinic-specific gaps in vaccine provision. Several sites noted that their HPV vaccine series initiation rates were more than 20% higher than their series completion rates. Further investigation revealed that this was due in large part to the highly mobile nature of patients seen in publicly-funded healthcare settings in the US. These sites chose to begin vaccination at ages 9-10 instead of ages 11-12. Implementation of vaccination at younger ages was highly successful, with 60-80% of eligible patients initiating the vaccine series. As dosing is recommended annually, we anticipate seeing increases in completion rates among 10-12 year olds in mid-2018. Additional strategies implemented included reminder/recall systems, involvement of clinic leadership, and creation of clinic scorecards with HPV vaccination rates. Conclusions. In the absence of organized national programs, intensive efforts with healthcare systems can achieve improvements in HPV vaccination rates.

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S02.3
CANCER PREVENTION SELF-EFFICACY AND ADHERENCE TO NATIONAL CANCER SCREENING GUIDELINES: RESULTS FROM THE HISPANIC COMMUNITY HEALTH STUDY/STUDY OF LATINOS (HCHS/SOL)

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Introduction: Sociocultural factors, such as health insurance status, income, education, and acculturation, have been shown to predict cancer screening among U.S. Hispanics/Latinos. However, these factors can be difficult to modify. Therefore, more research is needed to identify individual-level modifiable factors that can be targeted to improve screening behaviors and subsequent cancer outcomes in this population. Purpose: The primary aim of this study was to examine cancer prevention self-efficacy (i.e., confidence in one's ability to lower his/her chances of developing cancer) as a determinant of adherence to national screening guidelines for colorectal, breast, prostate, and cervical cancer among Hispanics/Latinos, while adjusting for well-established determinants of cancer screening. Methods: Participants were from the multi-site Hispanic Community Health Study/Study of Latinos (HCHS/SOL) Sociocultural Ancillary Study (N = 5,313). The National Cancer Institute (NCI) Health Interview National Trends Survey was used to assess cancer prevention self-efficacy and receipt of cancer screening. Adherence was defined as receipt of screening within recommended time frames according to guidelines from the United States Preventive Services Task Force and the American Cancer Society that were in effect during the study period. Results: Adjusting for age, health insurance status, income, education, acculturation, Hispanic/Latino background, and study center, greater cancer prevention self-efficacy was marginally associated with greater adherence to screening for colorectal (OR 1.13, 95% CI [.99 - 1.30], p = .07), breast (OR 1.16, 95% CI [.99 - 1.36], p = .07) and prostate cancer (OR 1.18, 95% CI [.97 - 1.43], p = .10), but not cervical cancer (p > .10). Conclusions: Findings suggest that cancer prevention self-efficacy may be a viable target for interventions aimed at improving screening adherence for the three most common cancers among Hispanics/Latinos. Nevertheless, the effects of cancer prevention self-efficacy were small and marginal, underlining that sociocultural factors like health insurance status, income, and acculturation are more robust determinants of cancer screening adherence among Hispanics/Latinos.

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S05.4
PROGRAMMED ENVIRONMENTAL ILLUMINATION DURING AUTOLOGOUS STEM CELL TRANSPLANTATION HOSPITALIZATION FOR THE TREATMENT OF MULTIPLE MYELOMA REDUCES SEVERITY OF DEPRESSIVE SYMPTOMS

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Purpose: A significant number of multiple myeloma (MM) patients undergoing an Autologous Stem Cell Transplant (ASCT) report clinical symptoms of depression. Depression during hospitalization predicts depressive symptoms and mortality following ASCT. We report initial results of a randomized clinical trial testing the effects of Programmed Environmental Illumination (PEI) using circadian stimulating bright white light (BWL) from 7-10AM daily on depressive symptoms during ASCT hospitalization. Methods: Patients (n=190) scheduled to receive an ASCT were assessed for eligibility. Those meeting study eligibility criteria (n = 42) completed the Center for Epidemiological Studies Depression Scale (CES-D) during a baseline assessment. They were then randomly assigned to PEI, using BWL or circadian ineffective, dim white light (DWL). BWL patients received 1,300 lux at the eyes while DWL patients received 90 lux at the eyes. All patients completed CES-D assessments at days 2 and 7 post-transplant, on the third day of engraftment and at one and three months post-discharge. Results: Linear mixed-model analyses revealed that there was no difference between the groups in CES-D total score at baseline (p = 0.7948). The interaction between time of assessment and light condition was significant [$F(5,146) = 2.63$; p = 0.0263; Effect Size (eta2 = 0.08)]. Compared to patients in the BWL condition, patients exposed to DWL reported greater levels of depressive symptoms 7 days post-transplant and on the third day of engraftment after controlling for potential demographic and medical covariates. Follow up assessments indicated that CES-D total scores declined for both groups post-discharge resulting in no significant group difference. On the third day of engraftment 72.22% of the participants in the DWL condition meet the criteria for clinically significant depressive symptoms compared to 41.18% in the BWL condition. Conclusion: PEI using BWL during ASCT hospitalization for the treatment of MM reduces the severity of depressive symptoms during hospitalization.

Future studies should examine the potential mechanisms whereby PEI reduces depressive symptoms.

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S23.1

USING SMARTPHONE TECHNOLOGY TO EXAMINE INTRA- AND INTER-PERSONAL ASSOCIATIONS OF COMMUNICATIVE BEHAVIOR WITH MOOD AND RELATIONSHIP SATISFACTION IN PATIENTS WITH CANCER AND THEIR SPOUSAL CAREGIVERS

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The extent to which persons with cancer and their spouses express their feelings and respond to one another is of paramount importance to the adjustment of both dyad members. In this study, patients with stage 2-4 breast or colorectal cancer and their spousal caregivers (N = 74 couples, M = 51.7 years old, 3% Hispanic, 87% Caucasian, 62% female patients, and 38% female caregivers) independently completed twice-daily assessments of communication, negative affect (NA), and relationship satisfaction via smartphone application in the early afternoon and evening for 14 sequential days (89% response rate). We examined intra- and inter-personal associations (i.e., actor and partner effects) between afternoon communication (the extent to which participants expressed their feelings, held back from expressing their feelings, supported their partner, and criticized their partner) and evening NA and relationship satisfaction using linear mixed models employing an Actor Partner Interdependence Model. Two actor, or within-person, effects emerged for NA. Patients' holding back was positively related to their own evening NA (b = 0.06 p = .043) and caregivers' support of the patient was negatively related to caregivers' own NA (b = -0.09, p = .013). A partner effect also emerged, such that caregivers' disclosure was positively related to patients' NA (b = 0.07, p = .008). With relationship satisfaction as the outcome, actor effects for supporting one's partner were found for both dyad members. Being supportive was positively related to one's own evening relationship satisfaction (b = 0.17, p = .022 for patients; b = 0.21, p = .011 for caregivers). An actor effect was also found for caregiver's criticism of his/her patient partner such that relatively high criticism was related to lower relationship satisfaction for the caregiver (b = -0.20, p = .036). With respect to partner effects, patients' reports of supporting their partners and criticizing their partners were, respectively, positively (b = 0.10, p = .045) and negatively (b = -0.13, p = .035) related to caregivers' relationship satisfaction. Likewise, caregivers' criticism of patients was negatively related to patients' relationship satisfaction (b = -0.12, p = .049). Findings from this smartphone-enabled ecological momentary assessment study (to our knowledge, the first in cancer) underscore the importance of patient and caregiver disclosure and responsiveness in explaining later adjustment both within and across dyad members.

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